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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/669,877	09/27/2000	Randell L. Mills	62-231-1EL	4531
20736 7590 12/17/2007 MANELLI DENISON & SELTER 2000 M STREET NW SUITE 700 WASHINGTON, DC 20036-3307			EXAMINER KALAFUT, STEPHEN J	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 12/17/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

09/669,877

Applicant(s)

MILLS, RANDELL L.

Examiner

Stephen J. Kalafut

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 30 Oct 2007.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 30 October 2007 has been entered.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-29, for reasons of record as previously applied to claims 1-28, are rejected under 35 U.S.C. 101 because the disclosed invention is inoperative and therefore lacks utility. See paper no. 4, pages 2-3, and paper no. 8.

Claims 1-29, for reasons of record as previously applied to claims 1-28, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. See paper no. 4, pages 3-7, and paper no. 8.

Applicant's arguments filed 30 October 2007 have been fully considered but they are not persuasive.

Applicant argues that the “Committee improperly assumes that because Dr. Souw’s appendices total hundreds of pages that they properly and completely address Applicant’s experimental evidence and arguments.” The previous argument where the Examiner points out the length of Applicant’s appendices, “over a hundred pages each” (emphasis in original) was in response to Applicant’s complaint that Dr. Souw’s appendices had totaled hundreds of pages, has nothing to do with the content of the respective appendices, but was made to show that Applicant has been even more guilty of the same verbosity for which he faults Dr. Souw.

Applicant sees no need to get into a debate over the differences between “theoretical” and “scientific” ground of rejection. The Examiner agrees, but points out that it was Applicant who first implied a difference between the two, when Applicant accused the “Committee” of “nitpicking on theoretical grounds”, but not having any “scientific grounds” for the rejections.

Applicant argues that the “Committee” has created a “new patentability standard” of acceptance by the scientific community, which it has imposed upon the Applicant. The relevance of “known scientific principles” and “contemporary knowledge” are found in MPEP §2107.01 and §2107.02, and are thus not created by the Examiner or any “Committee”.

Applicant repeats his argument that Lieb disproves Krieg. Lieb does not reject the Heisenberg uncertainty principle entirely, but instead differs with an argument that is often based thereon. See page 555, left column, first two paragraphs. He states that “Eq. (4)” (which is on page 554), from the Heisenberg uncertainty principle, is correct, but “it is a pale reflection of the power of the operator  $-\Delta$  to prevent collapse” (page 555, left column 4<sup>th</sup> paragraph). Lieb then offers the Sobolev inequality as a “better uncertainty principle”. Nowhere, however, does Lieb ever allow for hydrogen atoms going below the conventionally known “ground state”.

Applicant argues that one skilled in the art need only compare the equations in his theory with those of Rathke's paper to determine if the sign of the classical wave equation is correctly presented. It is initially pointed out that while a previous action may have implied that Rathke's paper was unavailable, it was actually the articles cited by Rathke that were not available, rather than Rathke's paper itself. Any confusion on this matter is regretted. However, one of the articles by applicant, from *Int. J. Hydrogen Energy*, "The grand unification theory of classical quantum mechanics", has become available due to being included in the IDS of 30 October 2007, thus allowing a comparison to be made. In both Rathke and applicant's article, the sign between the first character, an upside-down Greek upper case delta ( $\Delta$ ), and the expression  $1/v^2 \delta^2/\delta t^2$ , in the classical wave equation, is minus. Now Applicant alleges the sign in Rathke's equation (9) has been changed, such a change amounting to fraud. It is noted that the plus sign between  $1/r^2 \Delta$  and  $1/v^2 \delta^2/\delta t^2$  also occurs in equation (8), which is derived by using a "separation ansatz", which is equation (7). There is no equation seen in Applicant's article that corresponds to Rathke's equation (9), and thus no basis for determining any alleged fraud.

Likewise, Barth mentions the classical wave equation, but does not reproduce the equation in his article. This equation does not include any term for the coulomb force between the electron and the atomic nucleus to which it is bound.

Regarding applicant's argument that the microwave-field Balmer line broadening in the Luque *et al.* paper being allegedly six orders of magnitude too low too account for that reported by applicant, see the Appendix to paper no. 20050919, pages 14-15.

Applicant argues that the arguments by the "Committee" concerning the difference in profile shapes in figures 4a, 4b and 4c of Cvetanovic *et al.* are without merit. Applicant states

that he as computer-fit the data himself, which fits a Gaussian profile corresponding to Doppler broadening. This is not persuasive because the difference in profile shape is apparent to the naked eye, and needs no computer fitting. Also see the Appendix to paper no. 20050919, pages 9-12.

Regarding the Attachments submitted with the IDS of 30 October 2007, or previously submitted but not considered:

Attachments 62, 71, 72, 79, 87, 91 and 93 have not been peer-reviewed, and thus do not (yet) have the credibility that peer-reviewed articles have, as explained in the Appendix to paper no. 20050504, Part I, section (A)(b).

Attachments 62, 72, 88, 89, 91, 93, 115 and 116 postulate the formation of hydrinos as an explanation for phenomena unrelated and/or irrelevant thereto, as explained in the Appendix to paper no. 20050504, Part I, section (A)(c) and (A.1).

Attachments 71, 79, 87, 89 and 91 contain data that is inconsistent with Applicant's theory. Applicant takes the known formula for energy states for a hydrogen atom,  $E = -13.6 / n^2$  eV, where  $n$  is the principal quantum number, and for this number uses fractions, where  $n = 1/p$ , where  $p$  is an integer, and  $E$  is the binding energy of the electron. Thus, the formula becomes  $E = -13.6 / (1/p)^2$  eV. When  $p=1$ , the hydrogen is in its "ground state". Then  $p$  is 2 or more, hydrogen is allegedly in an energy state below the "ground state", such a hydrogen atom being called a "hydrino". By setting  $p$  equal to the integers, the predicted energy values would be -13.6 (1) eV, -13.6 (4) eV, -13.6 (9) eV, -13.6 (16) eV and -13.6 (25) eV. Applicant expresses these values in terms of a variable called  $q$ , so that for these five energy levels,  $q$  equals 1, 4, 9, 16 and 25. The differences between one level, corresponding to a given value of  $p$ , and the next level,

may be expressed as  $q$  equaling 3, 5, 7 and 9. Higher values of  $p$  would lead to further higher odd values of  $q$  (11, 13, etc.). The differences between two energy levels, corresponding to a difference in  $p$  of 2, may be expressed as  $q$  equaling 8, 12 and 16. A value 4 would be possible, going from  $p$  being zero, which would represent an unbound electron ( $n = \text{infinity}$ ), to  $p$  being 2. Thus, applicant's formula predicts emissions of energy corresponding to values of  $q$  equaling 1, 3, 4, 5, 7, 8, 9, 11, 12, 13, 15 and 16. Applicant's data, however, shows  $q$  equaling 1, 2, 3, 4, 6, 7, 8, 9 or 11. Looking at theoretical values of  $q$  up to 11, the data shows  $q$  equaling 2 and 6, which are precluded by applicant's formula, while omitting the predicted value of 5. It is noted that applicant makes numerous references to  $q$  equaling 2 (corresponding to a value of 27.2 eV), a value which nowhere fits into his formula.

Attachments identified by the letters A through R refer to court proceedings and communications involving various office personnel or Senators, and are thus irrelevant to determining the patentability of the present invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is 571-272-1286. The examiner can normally be reached on Mon-Fri 8:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sjk



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